x is an integer from 3 to 50, if Q is a valency or oxygen, and an integer from 3 to 1000 if Q is an ester or amide function, G_1 and G_2 are a valency, oxygen or an ester or amide group, it being possible for the two groups to be identical or different, n is an integer from 4 to 44, y is an integer from 2 to 50, and R_3 is hydrogen or a lower alkyl having 1-6 C atoms.--

IN THE CLAIMS

Please cancel Claims 11 and 15-34.

Please add the following claims.

--35. (New) Nanoparticles suitable for the treatment of brain cancer and made of a polymeric material, said nanoparticles comprising said polymeric material, one or more substance(s) physiologically effective in the treatment of cancer upon delivery to a mammal, one or more stabilizer(s) for said nanoparticles allowing targeting of said physiologically effective substance(s) to a specific site within said mammalian body and/or a surfactant coating on said nanoparticles, said nanoparticles optionally being provided within a physiologically acceptable carrier and/or diluent allowing the delivery of said nanoparticles to the target within said mammal after administration.

36. (New) A method of treating brain cancer, comprising;

administering a nanoparticle to a patient in need thereof; wherein said nanoparticle comprises polymeric material, one or more substances physiologically effective in the treatment of cancer upon delivery to a mammal, one or more stabilizers which allow targeting of said physiologically effective substances to the brain, and/or a surfactant coating on said nanoparticles.

37. (New) The method of Claim 36, wherein said nanoparticle formulated in a composition which further comprises a physiologically acceptable carrier and/or diluent.

38. (New) The method of Claim 36, wherein said polymeric material has a diameter of below 1,000nm.

39. (New) The method of Claim 38, wherein said polymeric material has a diameter of from 1 to 1,000 nm.

40. (New) The method of Claim 36, wherein said polymeric material is selected from the group consisting of polyacrylates, polymethacrylates, polycyanoacrylates, polyacrylamides, polylacetates, polyglycolates, polyanhydrates, polyorthoesters, gelatin, polysaccharides, albumin, polystyrenes, polyvinyls, polyacrolein, polyglutaraldehydes; derivatives; copolymers and mixtures thereof.

41. (New) The method of Claim 36, wherein said physiologically effective substances are adsorbed, absorbed and/or incorporated in the nanoparticles.

42. (New) The method of Claim 36, wherein said physiologically effective substances comprises one or more chemotherapeutic agents for the cancer treatment.

43. (New) The method of Claim 42, wherein said chemotherapeutic agents are selected from the group consisting of alkylating agents, antimetabolites, natural anticancer products, hormones, metal co-ordination complexes and mixtures thereof.

44. (New) The method of Claim 42, wherein said chemotherapeutic agents are selected from the group consisting of nitrogen mustards, nitroso ureas, ethylene imines, methylmelamines, folic acid analogs, pyrimidine analogs, purine analogs, vinca alkaloids, epipodophyllotoxins, antibiotics, estrogens, gonadotropin-releasing hormon analogs, antiestrogens, androgens, platinum complexes and mixtures thereof.

45. (New) The method of Claim 42, wherein said chemotherapeutic agents are doxorubicin and/or mitoxantrone.

46. (New) The method of Claim 36, wherein the stabilizer and/or surfactant coating material is selected from the group consisting of stabilizers/surfactants which allow a passage

of said nanoparticles including said physiologically effective substance(s) across the blood brain barrier in said mammal and stabilizers/surfactants which allow a release of said physiologically effective substance(s) from said nanoparticles and a passage of said substance(s) across the blood brain barrier separate from said nanoparticles.

47. (New) The method of Claim 46, wherein said stabilizer/surfactant comprises a substance selected from the group consisting of polysorbates, dextrans, carboxylic acid esters of multifunctional alcohols, polyoxamers, polyoxamines, alkoxylated ethers, alkoxylated esters, alkoxylated monoglycerides, alkoxylated diglycerides, alkoxylated triglycerides, alkoxylated phenols, alkoxylated diphenols, substances of the Genapol^R and Bauki^R series, metal salts of carboxylic acids, metal salts of alcohol sulfates, and metal salts of sulfosuccinates and mixtures of two or more of said substances,

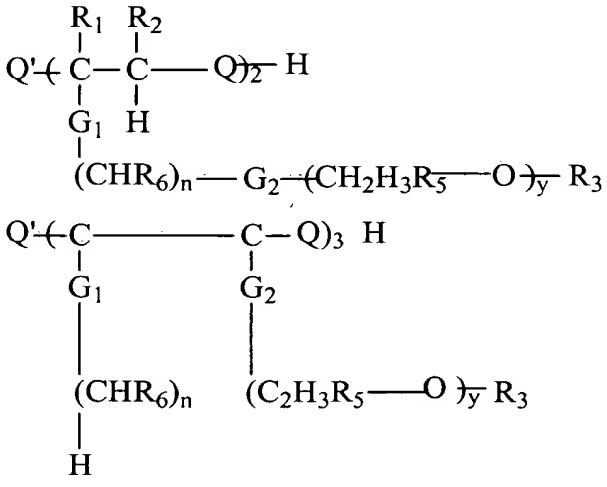
B2 cont.

wherein said substances of the Genapol^R series are represented by the formula:

$CH_3(CH2)_y$-(O-CH_2-$CH_2)_x$-OH

wherein y is in the range of 4 to 18 and x is in the range of 1 to 18, and

wherein said substances of the Bauki^R series are represented by the formula (I) or (I'):



(I)

(I')

in which R_1, R_2, R_5 and R_6 are identical or different and represent hydrogen and a methyl or ethyl group,

Q represents a valency, oxygen or an ester or amide bridge and Q' denotes hydrogen if Q represents a valency or oxygen, and is a hydroxyl or amino group if Q represents an ester or amide bridge,

x is an integer from 3 to 50, if Q is a valency or oxygen, and an integer from 3 to 1000, if Q is an ester or amide function, G_1 and G_2 are a valency, oxygen or an ester or amide group, it being possible for the two groups to be identical or different, n is an integer from 4 to 44, y is an integer from 2 to 50, and R_3 is hydrogen or a lower alkyl having 1-6 C atoms.

48. (New) The method of Claim 46, wherein said stabilizer/surfactant comprise a substance selected from the group consisting of polysorbate 20, polysorbate 40, polysorbate 60, polysorbate 80, polysorbate 81, polysorbate 85, dextran 12,000, dextran 70,000, fatty acid esters of glycerol and sorbitol as glycerol monostearate, sorbitan monostearate, sorbitan monooleate, polyoxamer 188 (Pluronic R F68), ethoxylated ethers, ethoxylated esters, ethoxylated triglycerides, ethoxylated phenols and diphenols, metal salts of fatty acids, and metal salts of fatty alcohol sulfates.

49. (New) The method of Claim 46, wherein said stabilizer/surfactant comprise a substance selected from the group consisting of sodium salts of fatty acids, sodium salts of fatty alcohol sulfates and mixtures of two or more of said substances.

50. (New) The method of Claim 46, wherein said stabilizer/surfactant comprise sodium stearate and/or sodium lauryl sulfate.

51. (New) The method of Claim 46, wherein said stabilizer/surfactant comprise a substance selected from the group consisting of polysorbate 80, polysorbate 85, dextran 12,000, dextran 70,000 and mixtures thereof.

52. (New) The method of Claim 37, wherein said carrier and/or diluent are selected from the group consisting of water, physiologically acceptable aqueous solutions containing salts and/or buffers.

B2 cont.

53. (New) The method of Claim 36, wherein said administering is intravenous administering.

54. (New) The method of Claim 36, wherein said mammal is a human.--

SUPPORT FOR THE AMENDMENTS

The specification has been amended to insert a description of the substances of the Genapol^{R} and Bauki^{R} series consistent with the enclosures submitted herewith. Applicants note that this information was also submitted in U.S. application serial No. 09/445,439 in the papers filed on December 13, 2001 and May 29, 2002.

Newly added Claims 35-54 are supported by the specification at pages 1-10 and by the original claims. No new matter is believed to have been added to this application by these amendments.

REMARKS

Claims 35-54 are pending. Favorable reconsideration is respectfully requested.

The present invention relates to nanoparticles suitable for the treatment of brain cancer (see Claim 35) and to a method of treating brain cancer using nanoparticles (see Claim 36).

The rejection of the claims under 35 U.S.C. §102(b) over Kreuter et al. is respectfully traversed. This reference fails to describe the claimed invention.

Kreuter et al. describe delivering agents across the blood-brain barrier using nanoparticles (see the Abstract). This reference does not describe treating brain cancer. The